

**A New Genus of Neotropical Anthocoridae that Resembles  
the Bed Bug**  
(Hemiptera)

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Several years ago an interesting brachypterous anthocorid was found in a collection of miscellaneous Cimicidae in the Paris Museum. It proved to be a female and was in such poor condition that a formal description did not seem to be justifiable. Since that time two additional females have turned up at the California Academy of Sciences from the collections of E. S. Ross and E. I. Schlinger. Although a male would be desirable, the species is so unusual that it is described at this time to make the name available for comparative studies and to call attention to its unique characteristics. The type is in the collection of the California Academy of Sciences.

***Astemmocoris* Carayon and Usinger, new genus**

Body stocky, broadly oval, rather flat. Surface semiglabrous, shiny, generally finely punctured or shagreened, with short bristles on head and pronotum; pilosity appressed. Lateral margins of pronotum without hairs. No long bristles at tip of abdomen.

Head rather obtuse at apex, subtriangular, eyes moderately protruding and widely separated, occupying basal angles without touching anterior margin of pronotum. Ocelli present only in submacropterous form, situated just behind and mesad of eyes. Antennae with first segment short, not reaching apex of head; second a little longer and thicker than third and fourth segments, the latter filiform and clothed with long hairs. Rostrum extending to posterior coxae; first segment very short, reaching to level of insertions of antennae, second segment very long, enlarged basally and attaining apex of middle coxae.

Pronotum subrectangular, its anterior margin slightly concave between two rounded projections formed by convergent anterior angles; posterior margin broadly concave in front of scutellar base. Anterior collar very narrow, distinctly constricted laterally. Disk convex, finely punctured and with a transverse depression on each side of middle in posterior half; sides strongly depressed. Scutellum almost equilateral, rather flat and smooth in brachypterous form, convex and shining in front and then flat and wrinkled in the submacropterous form.

Hemelytra in submacropterous form leaving abdomen broadly exposed laterally and posteriorly; corium rather dull, finely shagreened and covered with short, appressed hairs; costal margin dilated like sides of pronotum and a little reflexed; median groove and cuneal fracture distinct, exocorium a little narrower than clavus. Membrane dull with a single short vein, scarcely visible, near outer margin. Hemelytra in brachypterous form, pad-like, about as wide as long and not reaching posterior margin of second abdominal segment; neither a groove

nor a cuneus visible on corium, costal margin dilated basally, membrane reduced to narrow apical edge of corium.

Mesosternum strongly grooved at middle (Fig. 1b). Metasternum sulcate, its posterior margin distinctly produced. Metapleura evenly shagreened except for ostiolar canals. Ostiolar groove well developed, forming a thick, posteriorly concave, transverse elevation, from the lateral apex of which a narrower longitudinal branch arises and bends forward, reaching anterior metapleural margin. Metapleuron narrowly depressed behind and laterad of scent gland canals.

Legs nearly alike; femora rather enlarged, without true spines but with a row of inconspicuous spiniform hairs along ventral surface; tibiae spined and hairy, without apical tufts (spongy fossae).

Abdomen rather flat and wide, lateral margins without a longitudinal suture on each side of first tergites; last segment distinctly concave at middle in dorsal view. Disk covered with short hairs that are broadly ovoid at base and very tapered apically.

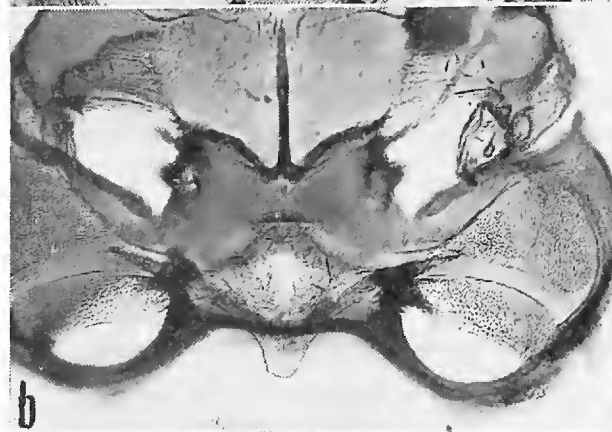
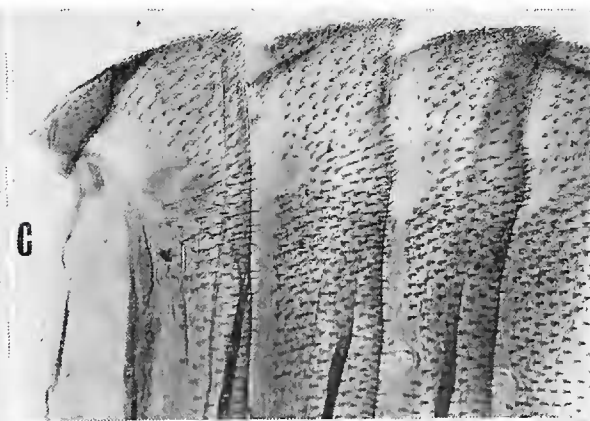
Ovipositor well developed. No copulatory tube or well differentiated ectospermalege, but ventrally near right margin at junction of segments VII and VIII with an irregular cuticular swelling suggesting a primitive type of ectospermalege.

Type species: *Astemmaeoris cimicoides*, new species

*Astemmaeoris* differs from all other anthocorids by: 1) the complete absence of ocelli in the brachypterous form (Fig. 1a) and 2) the absence of longitudinal sutures at the sides of the first abdominal tergites (Fig. 1c).

In spite of its peculiarities *Astemmaeoris* belongs, without any doubt, in the subfamily Lyctocorinae (*sensu* Poppius, 1909, Acta Soc. Sci. Fennicae, 37(9): 1-43). Many characteristics and especially the structure of the scent canals show a relationship to the genus *Lyctocoris*. *Astemmaeoris* differs, however, in the characters mentioned above, in the absence of a genital apophysis on the ventral surface of sternite VII, and in the probable presence of an ectospermalege (Fig. 1d) which is completely lacking in *Lyctocoris* and its allies.

Because of their ecological characters, with a tendency to occasional hematophagy, and the cimicoid habitus in the larvae and brachypterous adults, the anthocorids of the "Lyctocoris Group" are closest to the Cimicidae. However, these anthocorids have unique characters that are not found in other members of the family or in the Cimicidae and therefore they cannot be considered as ancestors of latter group. Males of the "Lyctocoris Group" have two parameres; their intromittent organ is not the left paramere but the phallus itself which has a seminal duct with a tracheal structure and a sharp sclerified vesica for injection, structures that have never been observed in the Cimicidae.





Of all the anthocorids the brachypterous *Astemmocoris* most closely resembles Cimicidae. Although reinforced by the complete absence of ocelli, this resemblance is not, in itself, sufficient proof of close relationship. It is, nevertheless, of great interest to show how the general form of Cimicidae could have been derived from an anthocorid-like ancestor.

### *Astemmocoris cimicoides* Carayon and Usinger, new species

**SUBMACROPTEROUS FEMALE** (Fig. 1f).—Body 2.8 times as long as wide across hind angles of pronotum; greatest width near middle of abdomen (2.04 mm). Head as long as pronotum at middle, its dorsal surface almost smooth except for fine punctures forming an inverted triangle between eyes; bases of hairs inconspicuous; dorsal interocular space 3.2 times as wide as diameter of an eye. Antennal segments one to four: 0.2 mm, 0.66 mm, 0.46 mm, 0.46 mm. Segments of rostrum: 0.2 mm, 1.2 mm, 0.36 mm.

Pronotum 2.7 times as wide as long at middle, its surface covered with inconspicuous fine hairs; sides broadly margined, especially anteriorly where they form rounded angles; anterior margin distinctly surpassing eyes laterally; posterior disk, except for transverse depressions, finely wrinkled. Scutellum broad at base and about one-third longer than pronotum. Hemelytra dull, covered with fine hairs that are more apparent than on rest of body.

Abdomen broadly oval, disk shining, shagreened, covered with short hairs that are thick at base and tapered apically; posterior margins of tergites slightly concave near sides. Length of ovipositor about equal to  $\frac{3}{8}$  total length of abdomen.

General color almost uniformly yellowish brown to reddish brown, rather pale yellowish ochre on anterior part of head, antennae, rostrum, legs, most of undersurface and part of scutellum. Pronotal collar, and particularly cuneus and membrane of hemelytra dark brown or almost black.

**BRACHYPTEROUS FEMALE** (Fig. 1e).—Resembles submacropterous form but distinctly wider (2.28 mm) with interocular space 4.2 times as wide as diameter of an eye, pronotum 2.9 times as wide as long at middle and hemelytral pads about as wide as long, leaving abdomen broadly exposed.

**SIZE**.—Submacropterous female 4.35 mm; brachypterous females 4.20 and 3.90 mm.

*Holotype submacropterous female*.—MONSON VALLEY, TINGO MARIA, PERU, 23 September 1954 (E. I. Schlinger and E. S. Ross). Paratypes: 2 females, one from Macoa, Marino, Colombia, 710 miles, 2 March 1955 (E. I. Schlinger and E. S. Ross) and the other from French Guyana,

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### EXPLANATION OF FIGURES

Fig. 1. *Astemmocoris cimicoides*: Brachypterous female, French Guyana; a) head and anterior portion of pronotum; b) internal view of ventral surface of thorax; c) right side of basal abdominal tergites; d) internal view of ovipositor (arrow indicates ectospermalege); e) brachypterous female, Macoa, Colombia; f) submacropterous female holotype, Tingo Maria, Peru.

St. Jean du Maroni, August. The latter is partially damaged and mounted on a slide. It is in the collection of the Muséum National d'Histoire Naturelle, Paris.

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***Ceracia dentata* a parasite of *Chimarocephala pacifica*  
*pacifica* in California**

(Diptera : Tachinidae and Orthoptera : Acrididae)

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*Ceracia dentata* (Coquillett, 1895), is a well-known endoparasite of Acrididae, having been reared from three of its subfamilies—the Cyrtacanthacridinae, Oedipodinae, and Acridinae. As early as 1897, Coquillett (1897, p. 9) recorded this tachinid as a parasite of *Chortophaga viridifasciata* (De Geer) on the basis of a rearing by T. Pergande from an adult collected at St. Louis, Missouri in June 1877. Subsequently it has been recorded from at least eight species of *Melanoplus* (Cyrtacanthacridinae), *Cammula* and *Chortophaga* (Oedipodinae), and *Aulocara* and *Psoloessa* (Acridinae). References to these rearings are listed in Greathead's (1963) very useful paper on insect enemies of Acridoidea.

Data on rearings of *Ceracia dentata* from a new host genus and species, *Chimarocephala pacifica pacifica* (Thomas) collected in the city of San Francisco, are presented below. Of the two subspecies of *Chimarocephala pacifica*, our rearings have been made from the nominate subspecies which occurs in the Coast Ranges from Sonoma County south into Monterey County. The females occur in several color phases, from brown to green, with most of our rearings from the former.

From four female nymphal grasshoppers of *C. p. pacifica* collected on the San Miguel Hills (elevation about 500 feet) in San Francisco, California, a total of 14 *C. dentata* larvae emerged. The nymphs were collected alive at the end of December 1959 and during January 1960 by Rentz, from green grassy slopes having southern exposures. These were briefly reported upon by Rentz (1961) without naming the tachinid. Both adult and nymphal stages of *C. p. pacifica* were collected together, however, only the nymphal females produced parasites. Only four of approximately 50 field collected nymphs produced *C. dentata* parasites.